APPENDIX D
MONITORING

MONITORING FORM (Bald Eagle)

DISTRICT:<Salmon-Challis N.F.(nests); All other districts - new roost/perch site detection.>

/PROJECT NAME:<Salmon River Canyon Fire Project>

/SITE/LOCATION> New nests - Eastern half of Salmon River Fire Project; if bald eagle nests are established and detected in other portions of the project area, monitoring area may expand. New, previously unknown roost/perch sites - all along Salmon River cooridor.

MONITORING OBJECTIVE:<To detect new bald eagle nests along the river which may be established after consultations with USFWS and may become at risk from helicopter, ground crews or fire impacts related to the project. Also, to detect any newly established roosts/perches in side-canyon drainages which may be at risk from project effects.>

MONITORING TYPE:<> Validation monitoring - to determine if planned/designed monitoring and mitigations adequately protect eagles and nest or important roost/perch sites.

PRIORITY:< Low.>

PARAMETERS:< Nests, perches or roosts should be within 1/4 mile of the Salmon River.>

METHODOLOGY:<Monitoring for new nests would be done from the river (via rafts, public observations, or incidental sightings by fire planning helicopter reconnaissance. Monitoring for new or significant roosts/perches that
may be at risk would be done during annual mid-winter bald eagle surveys. >

FREQUENCY/DURATION:<Monitoring would be required every 2-3 years only.>

VARIANCE LIMITS: <Actions which risk disturbance, displacement or potential mortality of nesting adults or nestlings would be suspended pending notification of USFWS. >

CORRECTIVE MEASURES:< Consultation with USFWS will be reinitiated, and pending results, project scheduling may be revised pending results of consultation and recommendations.>

DATA STORAGE:<Reports of monitoring results would reside in the IBM under the project title filing.>

REPORT:<Reports would be in narrative form.>

PROJECTED COST<$1,500/year across the project area. >

PERSONNEL NEEDED:<Two technicians or one tech and one biologist per Forest or administrative unit..>

RESPONSIBLE OFFICIAL:<District or Forest Wildlife Biologist of the respective administrative unit involved.>

PREPARED BY:> Steve Blair, Forest Wildlife Biologist, Nez Perce N.F

/DATE:<4/6/99 >

MONITORING FORM (Peregrine Falcon)

DISTRICT:<(Salmon River RD, Nez Perce NF)>

/PROJECT NAME:<Salmon River Canyon Fire Project>

/SITE/LOCATION: Shingle Creek nest, Sheep Gulch nest, Lucile nest, Hell's Canyon nest.

MONITORING OBJECTIVE:< Monitoring each nest (March-May) in the spring prior to planned ignitions will be required to determine if each nest is active. If active, subsequent monitoring and mitigation of burn activities will be required during the nesting/fledgling period. If nest is not active or has failed for the year, no subsequent mitigations are needed when burns conducted near that nest. For burns conducted within a 1 mile radius of any active nestwith either ground crews or helicopter, it is likely that a "may affect, not likely to adversely affect" BA conclusion and U.S. Fish & Wildlife Service conccurrence will require on-site monitoring of nesting peregrine and chick behaviors during burning or helicopter activity within a 1 mile radius of the nest to detect disturbance or activity-induced changes in peregrine behavior which might signal risk of disturbance, displacement, abandonment or other mortality of nestlings. "Nest Stewards" will be required to have radio contact with helicopter and ground crews so operations can be suspended if peregrines leave the nest or show behaviors which suggest risk to successful nesting or chicks. If burns are conducted within a 10 mile radius of an active nest during the nesting/fledgling period (March-August), success of nest and fledglings should be monitored to attempt to determine if burns affecting foraging areas around nest may have impacted hunting/foraging areas during nestling/fledgling feeding. Results of each day and year's monitoring will be prepared in monitoring report to U.S. Fish and Wildlife Service. (NOTE: These monitoring actiions are based on previous consultations related to the Shingle Creek nest and timber harvest/planting activities.)

MONITORING TYPE:< Implementation monitoring - Did we do what the monitoring plan required? Effectiveness monitoring - Were the prescribed monitoring and feedback actions sufficient to ensure that no adverse impacts to the peregrines, chicks, or successful nesting actions resulted from the prescription burn activities.

PRIORITY: Very high priority - especially if burns conducted during March-August period adjacent to active nesting sites.

PARAMETERS: See parameters in Shingle nest Biological Opinion.

METHODOLOGY: One or two (depending on visibility) technicians or biologists will be present in clear view of the monitored nest beginning about daylight. When burn activities or related travel within 1 mile of the potentially affected nest occur, observance of the adults and young will be made throughout action periods. If planned activities are observed to cause a change in peregrine behaviors (ie. kecking, jumping, excitement at the nest which would indicate the birds have been disturbed by the activities), nest steward will communicate to crews or helicopter to remain behind visual barriers (ie. ridgelines, trees, etc.). If the effort does not adequately mitigate disturbance of the nesting behavior, operations will be suspended or modified to eliminate disturbance , displacement or abandonement risks at the nest. Notes will be taken to help determine whether the threshold of the nesting pair for disturbance was exceeded by project operations.

FREQUENCY/DURATION:<Monitoring of nesting peregrine behaviors will occur on any day that project activities occur within a 1 mile radius of the active nest.>

VARIANCE LIMITS:<Variance limits will be determined by experience and examples learned from similar monitoring of the Shingle Creek nest, unless consultation with U.S. Fish & Wildlife Service suggests other parameters.>

CORRECTIVE MEASURES:<If monitoring determines that nesting success is being threatened by activities, the activities will be suspended within 1 mile of the nest until after the nest is determined to have failed or until all nestlings have successfully fledged and left the nest area. Depending on US Fish & Wildlife Service consultation results, burns may be conducted anytime outside the nesting/fledgling period irrespective of nest occupancy.>

DATA STORAGE:<Results of monitoring and monitoring reports will be kept on the IBM and filed under the project name.>

REPORT:<The report will be in narrative form.>

PROJECTED COST:<$500 per nest per year to monitor nesting behaviors during nearby (within 1 mile of nest) activities..> Note: If burn activities within 1 mile of nests are deferred until after fledgling periods, this cost would not be required. $500 per year to monitor effects of burns conducted within 10 mile radius of active nests during nestling/fledgeling period (March- August). If all burns within 10 miles of active nests are conducted from mid-September through November, no monitoring costs should be required, because risks and impacts would be assumed insignificant or nil.

PERSONNEL NEEDED:<One technician per year. In some instances, one technician may be replaced by a biologist, depending on available program staffing.>

RESPONSIBLE OFFICIAL:< District Wildlife Biologist. If District Biologist not available, District Ranger will replace..>

PREPARED BY: Steve Blair, Forest Wildlife Biologist, Nez Perce N.F.>

/DATE:<4-6-99>

MONITORING FORM

DISTRICT: North Fork and the Salmon-Cobalt Ranger Districts

/PROJECT NAME: Salmon River Canyon Project

/SITE/LOCATION: Burn units 21,22,23,24,36,37

MONITORING OBJECTIVE: To determine the effects of prescribed fire on soil surface erosion. This data will be compared to the Salmon National Forest, Forest Plan Soil Quality Standards to determine whether or not the standards are being met. The soil quality standards are designed to maintain long-term soil productivity.

MONITORING TYPE: This will be effectiveness monitoring to determine whether or not the low intensity burns prescribed by this project (as well as the associated small areas of moderate to high intensity that may inadvertantly occur) maintain long-term soil productivity as measured by soil erosion losses.

PRIORITY: Mandatory based on the Forest Plan, therefore this is a priority monitoring item.

PARAMETERS: According to the Forest Plan, this monitoring is required on 10 percent of the prescribed burning areas.

METHODOLOGY: Use of erosion pins

FREQUENCY/DURATION: Probably only the first growing season after the burn, unless initial monitoring indicates a desire to continue longer. Once per growing season should be adequate.

VARIANCE LIMITS: According to Forest Plan Soil Quality Standards, if more than 1/2 of the A or of the AC horizon are lost to erosion, the losses are considered unacceptable.

CORRECTIVE MEASURES: If the exceedence of Soil Quality Standards occurs in several of the initial burns, probably more stringent mitigation would be required...possibly requiring burning of smaller portions of units that would have more homogeneous fuel moisture conditions. This would allow for more control of fire intensities and less chance of areas burning out of prescription.

DATA STORAGE: Initially data will be stored as hard copies in the files of the Forest Soil Scientist.

REPORT: Informal data sheets listing average soil erosion for plots

PROJECTED COST: Approximately $500 per monitoring site times estimated 6 sites for a total of $3000.

PERSONNEL NEEDED: One journey level soil scientist

RESPONSIBLE OFFICIAL: Salmon-Challis NF, Forest Soil Scientist

PREPARED BY: Ken McBride; Bitterroot NF, Soil Scientist (Salmon River Canyon Project IDT member).

/DATE: June 10, 1999

TES PLANTS AND NOXIOUS WEEDS MONITORING FORM

PROJECT NAME: **Salmon River Canyon Project Prescribed Fire**

SITE/LOCATION: Known populations and habitats for TES plant species , and known noxious weed infestations and susceptible habitat types. Sites will depend on burn units, species, and habitat.

MONITORING OBJECTIVES:

1. To determine the continued viability of known populations of the above Sensitive species within burn units following prescribed fire.
2. To determine whether prescribed fire has increased noxious weed infestations, or allowed invasion of susceptible habitat.

MONITORING TYPE: Baseline, Implementation, Effectiveness, and Validation.

PRIORITY: Highest. These are two of the major issues of the SRC project.

PARAMETERS: Known populations, infestations, and suitable habitats (grasslands, open ponderosa pine and Douglas-fir stands, certain riparian areas). Refer to tables and maps in project file and EIS to determine which species are appropriate for which Forest/BLM.

METHODOLOGY: Baseline monitoring using Qualitative Vegetative Monitoring Form (attached). Demographic monitoring methods to be determined by each Forest Botanist. Also walk-throughs of suitable habitats.

FREQUENCY/DURATION: Baseline monitoring prior to burning. Thereafter, plots read every year for 3 years, and every other year for another 5 years.

VARIANCE LIMITS: Decline in TES populations decline over 3 years. Increases in noxious weed infestations. New infestations after burning.

CORRECTIVE MEASURES: TES plant populations or noxious weed infestations will be avoided during future burning. Integrated weed management will be implemented.

DATA STORAGE: Hard copies to be kept in Forest Headquarters and Districts (including BLM). Electronic forms in Forest electronic files.

REPORT: Hard copy (including maps) and electronic.

PROJECTED COST: 4 person/days field time plus 1 person/day office (approx. $1000/year)

PERSONNEL NEEDED: Forest Botanist and/or Weed Coordinator and 1 other person (biotech or Forest TES plants coordinator), 4 days per field season, plus 1 day office time

RESPONSIBLE OFFICIAL: Forest Supervisor/BLM District Manager

PREPARED BY: Alexia Cochrane, Botanist, Nez Perce NF

DATE: 7 May 1999

Noxious Weed Qualitative Vegetation Monitoring Form

Examiners:_____-
_____

Date	Time	Site Name:
Location:		Site #:
		T. R. Sec. QSec. QSec.
		Lat. Long.
Target Weed:		

Cover Class by Life Forms

	0%	**1-5%**	**6-20%**	**21-45%**	**46-70%**	**71-100%**
weed name						
Annual Grasses						
Perennial Grasses						
Forbs						
Shrubs						
Trees						

Dominant Plants on Site	
Other Noxious Weeds:	

Noxious Weed Density Classes
(Flowering plants/meter sq.):

0	
1-25	
26-75	
75-100	
>100	

Noxious Weed Distribution

Isolated	
Scattered	
Scattered-Patchy	
Patchy	
Continuous	

Phenology Class at the time of monitoring:

Phenology	Estimated Percent
Rosette	
Bolting	
BU-1	
BU-2	
BU-3	
BU-4	
Flower	
Senescent	

Comments/Observations_____-
_____-
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